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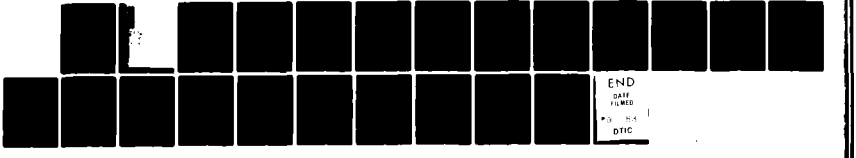

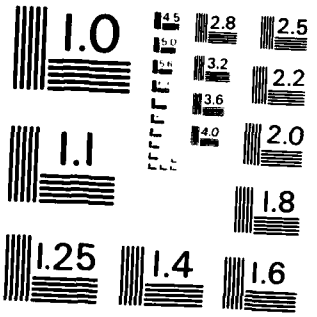

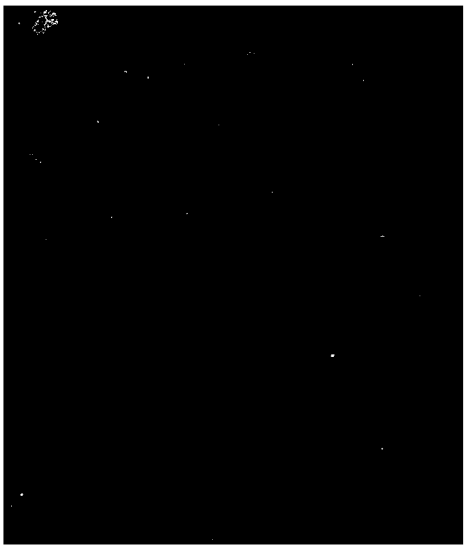

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The report describes the archival and oral history collections of the Naval Research Library, the depositories in which they are located, and the procedures which must be followed in order to use them. The report includes a selected bibliography of published materials relating to the history of naval research, the histories of Navy laboratories, and the history of NRL.

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THE HISTORICAL RECORDS OF THE NAVAL RESEARCH LABORATORY

A GUIDE FOR RESEARCHERS

INTRODUCTION

This report is a guide to resources available for research in the history of naval research, with particular reference to the Naval Research Laboratory (NRL), Washington, D.C. This guide describes the categories of records which are created at NRL, identifies the locations of the preserved records, and sets forth criteria for access to these records.

Specific questions concerning research in NRL records should be addressed to: The Commanding Officer, Naval Research Laboratory, Washington, DC 20375 (ATTN: NRL Historian, Code 2604).

THE NAVAL RESEARCH LABORATORY

In 1916, Congress authorized construction of a "Naval Experimental and Research Laboratory," with a stated mission to "undertake laboratory and research work on the subjects of gun erosion, torpedo motive power, the gyroscope, submarine guns, protection against submarines, improvements in radio installations and such other necessary work for the benefit of government service." After many delays, the Laboratory opened on 2 July 1923 with five buildings, a few hand-picked scientists, a meager budget, and two major research fields—radio and sound.

Over the past 60 years, NRL has grown beyond its modest beginnings, gained national and international recognition as a center for scientific excellence, and has earned designation as the "Corporate Laboratory of the U.S. Navy." The Laboratory has made major contributions to science and the Navy in such diverse areas as radar, sonar, radio direction-finding, chemistry of fire suppression, marine technology, underwater acoustics, atmospheric physics, x-ray and radio astronomy, plasma physics, fiber optics, and laser technology. Currently, the Laboratory undertakes basic and applied research, exploratory and advanced development in 15 broad categories of research, ranging from communications to directed energy devices, to undersea technology. The Laboratory has 15 research divisions organized into General Science and Technology, Systems Research and Technology, Material Science and Component Technology, and Space and Communications Technology Directorates. The main Laboratory occupies 129 acres within the District of Columbia and is augmented by 20 field sites. The Laboratory's work is performed in more than 400 buildings and facilities by a full-time permanent work force of 3200, half of which are science and engineering professionals.

NRL is jointly managed by a naval commanding officer and a civilian director of research. Internally, NRL is divided into four research directorates, within which research and development projects are undertaken; the Technical Services Directorate, which provides administrative support for research; and the Executive Directorate, comprising four divisions which provide direct management support to

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the commanding officer and the director of research. The Research Advisory Committee (the director of research and four associate directors) functions as a corporate planning board. Research funding is provided on a project basis under the Naval Industrial Fund (NIF) by sponsors, which include the Office of Naval Research, the Naval Systems Commands, the Naval Material Commands and other Federal agencies, such as the Defense Advanced Research Projects Agency (DARPA), the Department of Energy (DOE), and NASA.

THE NRL HISTORY PROGRAM

The NRL history program was established in 1977. The program is under the direction of the NRL historian and is located within the Technical Information Division (TID). The NRL historian provides professional guidance and leadership to the Laboratory in the field of history and historic preservation and directs a multifaceted history program, which includes oral history, historical research and writing, archival preservation, and visual history.

As head of the NRL history program, the NRL historian has the following major duties and responsibilities:

1. Plans the overall NRL history program, including the setting of program priorities and the selection of specific projects;

2. Provides staff support to the head, TID, and serves as a member of the TID Division Council;

3. Provides professional assistance, guidance, and advice to top management on matters relating to records management and the proper preservation of documents, photographs, and artifacts;

4. Plans and carries out an oral history program for the Laboratory;

5. Plans and outlines original historical studies of the Laboratory and performs historical research leading to presentations suitable for both general and scholarly audiences;

6. Undertakes special studies for Laboratory top management;

7. Develops and maintains an historical reference collection and responds to internal and external requests for information pertaining to the history of the Laboratory and the history of naval research.

REFERENCE SOURCES

The following bibliography consists of selected histories that contain background information on the history of naval research and technology, the history of naval laboratories, and the history of NRL. The listing is not exhaustive, and the titles vary greatly in quality.

Naval Research and Technology

Albion, Robert G., "The Administration of the Navy, 1816-1947," *Public Admin. Rev.* 5 (1945): 293-302.

The Bird Dogs (authors' nickname), "The Evolution of the Office of Naval Research," *Physics Today* 14 (1961): 30-35.

Booz-Allen and Hamilton, Inc., *Review of Navy R&D Management, 1946-1973*, Washington: Department of the Navy, 1976.

Bowen, Harold G., *Ships, Machinery and Mossbacks: The Autobiography of a Naval Engineer*, Princeton: Princeton University Press, 1954.

Daniels, Josephus, *The Cabinet Diaries of Josephus Daniels*, E. David Cronin, ed., Lincoln, NB: University of Nebraska Press, 1963.

David, Vincent, *Postwar Defense Policy and the U.S. Navy, 1943-1946*, Chapel Hill, NC: University of North Carolina Press, 1966.

Dow, Jennings B., "Navy Radio and Electronics during World War II," *Proc. Inst. Radio Engineers* **34** (1946): 284-287.

Furer, Julius A., *Administration of the Navy Department in World War II*, Washington: Department of the Navy, 1959 (pp. 737-808 cover "Research and Development").

____, "Narrative History of the Office of the Coordinator of Research and Development," unpublished history in the series, "U.S. Naval Administrative Histories of World War II," deposited in the Navy Department Library, 1946.

____, "Naval Research and Development in World War II," *J. Am. Soc. Naval Engineers* **62** (1950): 21-53.

Hewlett, Richard G. and Duncan, Francis, *Nuclear Navy, 1946-1962*, Chicago: University of Chicago Press, 1974.

Hooper, Edwin B., "Over the Span of 200 Years—Technology and the U.S. Navy," *Naval Engineers J.* (Aug. 1976): 17-23.

Howeth, L.S., *History of Communications-Electronics in the United States Navy*, Washington: Government Printing Office, 1963.

Jackson, Lt. Donald, and Herring, Louise, "Administrative History—Office of Research and Inventions, 1 July-31 December 1945," unpublished history in series, "U.S. Naval Administrative Histories of World War II," deposited in Navy Department Library, 1948.

Leutz, James R., "Technology and Bargaining in Anglo-American Naval Relations: 1938-1946," U.S. Naval Institute *Proceedings* **103** (1977): 50-61.

Madden, Robert M., "The Bureau of Ships and Its E.D. Officers," *J. Am. Soc. Naval Engineers* **66** (1954): 9-41.

Pittsburgh University Historical Staff, Office of Naval Research, "The History of United States Research and Development in World War II," unpublished manuscript written in 1950 and deposited in the Navy Department Library.

Roskill, Stephen, *Naval Policy between the Wars*, two vols., London: Collins, 1968 (Vol. I), Annapolis: Naval Institute Press, 1976 (Vol. II).

Salkovitz, Edward I., *Science, Technology and the Modern Navy, 1946-1976*, Washington: Office of Naval Research, 1976.

Scott, Lloyd N., *Naval Consulting Board of the United States*, Washington: Government Printing Office, 1920.

U.S. Bureau of Ships, "An Administrative History of the Bureau of Ships During World War II," four vols., unpublished history in the series, "United States Naval Administrative Histories of World War II," deposited in Navy Department Library, 1952.

U.S. Navy, *History of the Bureau of Engineering, Navy Department, During the World War*, Washington: Navy Department, 1922.

Naval Laboratories and Centers

Calvert, Allen Phillip, "The U.S. Naval Engineering Experiment Station, Annapolis," U.S. Naval Institute *Proceedings* **66** (1940): 49-51.

Christman, Albert B., *Sailors, Scientists and Rockets: Volume 1 of The History of the Naval Weapons Center, China Lake, California*, Washington: Department of the Navy, 1971.

____, and Gerrard-Gough, J.D., *The Grand Experiment at Inyokern: Volume 2 of The History of the Naval Weapons Center, China Lake, California*, Washington: Department of the Navy, 1978.

Coggeshall, W.J., and McCarthy, J.E., "The Naval Torpedo Station, Newport, Rhode Island," manuscript of an article originally printed by the Training Station Press, 1920, and reprinted in 1944 by Remington Ward, Newport, R.I.

Fresh, J. Norman, "The Aerodynamics Laboratory (The First 50 Years)," Washington: Department of the Navy, Aeronautical Report 1070, 1964.

Leggett, Wilson D., "The U.S. Naval Engineering Experiment Station," *U.S. Naval Institute Proceedings* 77 (1951): 517-529.

McCollum, Kenneth G., ed., *Dahlgren*, Dahlgren, Va.: Naval Surface Weapons Center, 1977.

Smaldone, Joseph, *History of the White Oak Laboratory, 1945-1975*, Silver Spring, Maryland: Naval Surface Weapons Center, 1977.

Todd, Ed, and Misa, Thomas, "History of the Naval Air Development Center, Warminster, Pennsylvania," contractors' phase report, printed and distributed as Report No. NADC-82251-09, 15 September 1982.

Naval Research Laboratory

Allison, David K., *New Eye for the Navy: The Origin of Radar at the Naval Research Laboratory*, Washington: Naval Research Laboratory, NRL Report 8466, 1981.

___, "The Origins of the Naval Research Laboratory," U.S. Naval Institute *Proceedings* **105** (1979): 62-69.

Baker, Homer R., "A Brief History of the NRL Sound Division, 1948-1967," manuscript history deposited in NRL Library.

Drury, Alfred T., "War History of the Naval Research Laboratory," unpublished history in the series, "U.S. Naval Administrative Histories of World War II," deposited in the Navy Department library, 1946.

Friedman, Herbert, *Reminiscences of Thirty Years of Space Research at the Naval Research Laboratory*, Washington: Naval Research Laboratory, NRL Report 8113, 1977.

Gebhard, Louis A., compiler, "Establishment and Organizational Documents of the Naval Research Laboratory," unpublished manuscript deposited in NRL Library, undated.

___, *Evolution of Naval Radio-Electronics and Contributions of the Naval Research Laboratory*, Washington: Naval Research Laboratory, NRL Report 8300, 1979.

Gimpel, Herbert, "History of NRL," 2 vols., unpublished manuscript deposited in NRL Library, 1975.

"History of the U.S. Naval Research Laboratory, 1923-1935," unpublished manuscript deposited in NRL Library, written in 1936.

Naval Research Laboratory, *Report of NRL Progress: Fifty Years of Science for the Navy and the Nation, July 1973* (special issue of the quarterly journal containing 50 historical perspectives by current and former NRL scientists).

Taylor, A. Hoyt, *The First Twenty-Five Years of the Naval Research Laboratory*, Washington: Department of the Navy, 1948.

___, *Radio Reminiscences: A Half Century*, Washington: Naval Research Laboratory, 1960.

___, "Thomas A. Edison and the Naval Research Laboratory," *Science* **105** (1947): 148-150.

ARCHIVAL MATERIALS

NRL Records

Categories of Records

NRL archival records fall into eight separate categories. *Administrative Records* include memorandums, correspondence, committee reports, and similar materials signed or approved by the commanding officer or by others at his direction. The materials form the official record of the administration of the Laboratory and of the research program. *Problem Files* are the official records of all research performed at the Laboratory. The files include materials related to specific research projects or assignments ("Problems"), such as correspondence, work unit forms, job order requests, research proposals, interim and final reports, and related documents. *Scientific Notebooks* are assigned to each NRL scientist and engineer when he or she begins working at the Lab. They are basic records of research work by individual scientists and engineers, and one of their principal purposes is to provide evidence for patent claims. *Releases for Publication and Presentation* are records of the history of negotiations and reviews pertaining to the publication or other presentation of scientific research outside the Laboratory. *Patent Files* contain the official documentation related to the negotiations involved in the prosecution of a

patent application by an NRL scientist or engineer. *Directives Records* are case files pertaining to the issuance and termination of directives, which are statement of official policy. The records document the structure of the Laboratory, the rules of operation, and all significant administrative changes and consitute the official record of administrative policies and actions. *Technical Reports* are published and unpublished books, articles, and reports which describe scientific or technical work performed by NRL personnel or pertain to work undertaken at NRL. *Special Collections* include two distinct types of records: (1) administrative records that have a unique quality warranting special designation (e.g., records of the NRL Research Advisory Committee), and (2) records which have permanent value, but which are not considered official records of the Laboratory.

Location of Records

NRL archival materials (unclassified through secret) are preserved in several different locations, each of which has different access requirements.

National Archives— Most NRL archival records dated prior to 1942 are in Record Group 19 in the National Archives Building, Washington, D.C. This record group includes records of the Bureau of Ships and the Bureau of Engineering and is part of the Navy and Old Army Records Branch. Many of these files were classified at one time and are still organized into secret, confidential and unclassified files. However, all of these materials have been declassified. NRL records maintained in the National Archives are the property of the National Archives and are open for public use. Researchers desiring to use these records should consult the Navy and Old Army Records Branch for guidance in using the collection.

Washington National Records Center, Suitland, Maryland—Most of the remainder of the Laboratory archival materials, some dating from 1923, but most after 1942, are stored at the Records Center as Records Group 181. This records group includes all records relating to Naval Districts and Shore Establishments. Administrative records are divided into unclassified, confidential, and secret files; however, each individual records box usually contains at least one classified folder, so that most unclassified records are handled as if they were classified. NRL records stored at the Records Center remain the property of NRL. Accordingly, researchers must obtain the written permission of the NRL commanding officer in order to use these records. In addition, in many cases unclassified documents are filed in boxes which also contain classified documents. To use these records, researchers who do not have a security clearance must make special arrangements to have the unclassified documents retrieved. Researchers wishing to use these records should contact the Head, Records and Correspondence Management Branch (Code 2021), NRL, for guidance in locating individual records.

Naval Research Laboratory—All official records of NRL are retained in temporary storage on the Laboratory for five (5) years following their retirement and then are transferred to the Records Center. All administrative records and some research program records are maintained by the Records and Correspondence Management Branch. Some research program records are retained in other offices, while technical reports are permanently retained by the Documents Section of the NRL Library. Special collections are retained by individuals and then transferred to the NRL historian, who retains them for an indefinite period before transferring them to the Records Center. Oral histories are permanently retained by the NRL historian. Access to official records, technical reports, oral histories, and other documents stored on the Laboratory normally is limited to NRL personnel and Navy and DoD officials. Outside researchers must obtain the permission of the NRL commanding officer both to come on board the Laboratory and to use research materials stored on the Laboratory. Researchers should contact the NRL historian (Code 2604) for guidance.

The foregoing information pertains solely to NRL records classified at the secret level or below. Records having higher classifications are maintained by the NRL Security Office until they are retired.

Subsequently, they are transferred to a naval depository specifically designed for preservation and retention of such records. Unless declassified, these records may be used only for official business and by properly cleared individuals.

Finding Aids

NRL has published a study of NRL records, which is approved for public release and for unlimited distribution: David K. Allison, *Records Systems of the Naval Research Laboratory: Central Record and Directives System Records*, Washington: NRL Memorandum Report 4464, 24 February 1981. This is a survey of NRL records handled by the Records and Correspondence Management Branch. It includes 33 pages of charts showing the principal groups of records which have been retired, their present location, and aids for finding specific documents within them. Additional studies of NRL records are in progress and may result in additional reports approved for public release.

The Records and Correspondence Management Branch maintains assorted findings aids. All collections of records shipped to other depositories are inventoried in twelve "Books of Box and File Lists," which identify general titles of records boxes and the files within each. These are general guides and do not identify specific documents or titles of specific file folders. The Branch also maintains thirteen different types of indices to records collections, based on subject, source (NRL organization), research problem number, and other entries. The indices vary greatly in quality and scope of coverage, and researchers have to rely on Branch staff or the NRL historian for assistance in using them.

Special Collections

Certain collections of records have special interest for researchers. These include both significant historical records which never became part of the official records of the laboratory, but which were collected and preserved by the NRL historian, and distinctive records collections within the official files. The following is a listing of the more significant special collections. The listings include title of collection, level of classification, and location. Researchers who have obtained approval to use NRL records may obtain specific information required for obtaining materials (such as accession numbers and location codes) from the Head, Records and Correspondence Management Branch (Code 2021).

Research Management and Program Administration

Records of NRL Management: Organization, Reports, Surveys, March 1955-December 1967 (U), four boxes, Washington National Records Center (WNRC).

Records of NRL Management Office (U), one box, WNRC.

Records of the Electrochemistry Branch, Chemistry Division (U), two boxes, WNRC.

NRL Notices and Instructions, 1953-1971 (U), two boxes, WNRC.

Minutes of the NRL Research Advisory Council, 1954-1967 (U), one box, WNRC.

Minutes of the NRL Research Advisory Council, 1967-1973 (S), one box, WNRC. Note: Most materials are unclassified but are stored with classified materials.

NRL Historical Events: Lists of Accomplishments (U), 15 folders, NRL historian's office.

Major Research Accomplishments of NRL, Technical Historical Reports (S), one 3-ring binder, NRL historian's office. Note: The majority of the reports are unclassified.

Serialized Correspondence of the Director of Research, 1956-1967 (U), four boxes, WNRC.

Serialized Correspondence and Subject Files of the Director of Research, 1967-1977 (S), ten boxes, WNRC. Note: Approximately 60% of the materials are unclassified, but they are interfiled with classified materials.

Records of the NRL Combined Research Group (World War II) (S), ten boxes, WNRC. Note: Many of the documents in this collection have been declassified; however, they are stored with classified materials.

Minutes of the NRL Scientific Program Board, 1949-1954 (S), two boxes, WNRC. Note: Many of the records in this collection have been declassified or were originally unclassified; however, they are stored with classified records.

Records of the NRL Scientific Program Board Pertaining to Research Problems, 1949-1954 (U), three boxes, WNRC.

Miscellaneous Records of the NRL Sound Division, 1947-1967 (S), seven boxes, WNRC. Note: Many of the records in this collection are unclassified but are stored with classified materials.

Miscellaneous Records of the NRL Chemistry Division, 1954-1969 (S), two boxes, WNRC. Note: Most of the records predating 1960 are unclassified

Papers, Correspondence, and Office Files of Individuals

Personal correspondence of Dr. W.A. ZISMAN (pioneer in surface chemistry; superintendent, NRL Chemistry Division, 1953-1967), 1956-1971 (U), three boxes, WNRC.

Papers of Dr. Harvey C. HAYES (superintendent, NRL Sound Division, 1923-1948), including records of the New London Experiment Station of World War I (U), ten boxes, WNRC.

Papers and file of Dr. Louis GEBHARD (pioneer in naval radio-electronics, superintendent, NRL Radio Division, 1927-1967), including early Navy and NRL project files, 1914-1953 (U), twelve boxes, boxes 1-7 in WNRC, boxes 8-12 in processing for transfer to WNRC.

Correspondence of Dr. E.O. HULBURT (superintendent, NRL Optics Division, 1924-1949, NRL director of research, 1949-1955), 1945-1955 (U), one file folder, NRL Records and Correspondence Management Branch (RCMB).

Correspondence and miscellaneous files of Dr. Robert PAGE (NRL director of research, 1957-1967), 1956-1968 (U), one box, WNRC.

Miscellaneous papers of Dr. Allen SCHOOLEY (superintendent, NRL Electronics Division, 1955-1966, senior scientist, NRL Ocean Sciences Division, 1966-1979), 1958-1963 (U), two boxes, WNRC.

Personal files of Dr. Alan BERMAN, while director of research, Hudson Laboratories, 1963-1967 (U), ten boxes, WNRC.

Personal files of Dr. Alan BERMAN, while NRL director of research, 1967-1982 (no classification), 20 cubic feet, NRL Historian's Office. Note: The collection is in the process of being appraised prior to transfer to WNRC. A small number of items are classified, but the bulk of the collection has not yet been reviewed for classification authority. The entire collection is being handled as secret in the interim.

Correspondence of Dr. Homer NEWELL (space scientist), 1956-1958 (S), one box, WNRC. Note: The collection contains some unclassified items, copies of which may be in the Newell Papers, NASA Historical Archives.

Miscellaneous Collections

Personnel dosimetry records for NRL employees (U—restricted access per Privacy of Information Act), 29 boxes, WNRC.

Records pertaining to the creation of NASA, 1957-1958 (U), six folders RCMB.

NRL patents of historical interest (U), one folder, RCMB.

Records pertaining to the creation of NASA, 1957-1958 (U), six folders RCMB.

Records pertaining to NRL space research committee (Project Vanguard), one folder, RCMB.

Records relating to the National Advisory Committee on Aeronautics (C), one box, WNRC. Note: Copies of unclassified items are in NACA Files, NASA Historical Archives.

Records pertaining to NRL research vessels (S), five boxes, WNRC. Note: Some of these records are unclassified but are stored with classified documents.

NRL inactive biographical files (individual folders on former key administrators and notable scientists) (U), four standard file drawers (12 cubic feet, approximately 400 individual folders), NRL historian's office. Note: These are not personnel records. The files include resumes, special notices and similar materials which have been approved for public release. Biographical files on active employees are maintained by the Information Services Branch (Code 2610).

Other Institutional Records

Primary documents pertinent to the history of NRL and the historical context of its activities may be found in the records of other Navy and federal agencies. Researchers interested in NRL history and the history of naval R&D should consider the following collections:

Institutional Collections

Records of the Bureau of Ordnance, R.G. 74, WNRC.

Records of the Bureau of Ships, R.G. 19, National Archives.

Records of the Coordinator of Research and Development, Navy Department, R.G. 198, National Archives.

Records of the General Board of the Navy, Operational Archives, Naval History Center, Department of the Navy, Washington Navy Yard, D.C.

Records of the Naval Consulting Board, R.G. 80, National Archives.

Records of the Office of Naval Information, Officer Biographies Branch, Operational Archives, Naval History Center.

Records of the Office of Naval Research, R.G. 298, WNRC.

Records of the Office of Scientific Research and Development, R.G. 227, National Archives.

Records of the Secretary of the Navy, R.G. 80, National Archives.

Records of the Secretary of the Navy/Chief of Naval Operations—Central Security-Classified Sections, Operational Archives, Naval Historical Center.

Personal Papers

Harold G. Bowen papers, Library of Congress, D.C.

Harold G. Bowen papers, Naval Historical Foundation, D.C.

Vannevar Bush papers, Library of Congress, D.C.

Josephus Daniels papers, Library of Congress, D.C.

Stanford C. Hooper papers, Library of Congress, D.C.

Edgar G. Oberlin papers, Naval History Foundation, D.C.

For a guide to naval history archival collections in public and private repositories at the federal, state, and local levels, researchers should consult *U.S. Naval History Sources in the United States*, compiled and edited by Dean C. Allard et al., Washington, D.C.: Naval History Division, Department of the Navy, 1979.

THE NRL ORAL HISTORY COLLECTION

The Oral History Collection consists of 26 individual and group oral histories. The collection includes 97 tape cassettes, most of which are indexed, and six complete transcripts. With one exception (the official transcript of the Alan Berman interviews), the oral histories are unclassified. The oral histories are arranged alphabetically and do not have separate designator numbers. In most cases, information contained in these oral histories will be released to authorized researchers who have obtained permission from the NRL commanding officer. Researchers requiring guidance on such matters should contact the NRL historian.

Berman, Dr. Alan

Subject: Physicist, specializing in underwater acoustics and oceanography; research scientist to the director of research, Hudson Laboratories, 1952-1967; director of research, NRL, 1967-1982; participated in or headed more than 15 major federal R&D studies, 1967-1982; key technical advisor and consultant to president's science advisor, National Academy of Sciences, NSF, Department of Defense, and Department of the Navy.

Contents: BERMAN's perspectives on naval R&D policy-making, R&D management initiatives at Hudson Laboratories and NRL, naval R&D requirements, 1952-1982; and main thrusts of Hudson Laboratories and NRL research programs.

Dates of Interviews: 3, 10, and 19 June and 18 November 1982

Interviewers: John A. S. Pitts and David K. Allison

Documentation: Nine tape cassettes (12 sides)
Typewritten index (5 pages)
"Dr. Alan Berman Oral History: Official Transcript" (S) (140 pages)
"Perspectives on Research in the Navy and at the Naval Research Laboratory: Based on Oral History Interviews with Dr. Alan Berman" (U) (136 pages and appendexes)

Access: Tapes and Official Transcript: Classified secret plus restricted access (restriction due to information covered by Privacy of Information Act)
"Perspectives": Category 2 plus unclassified

Addendum: Dr. Berman was also the subject of an oral history conducted on contract as part of the Navy Laboratories Oral History Program. The oral history concerns Dr. Berman's perspectives on Navy R&D 1967-1980.

Date of Interview: 22 September 1980 *Interviewer*: Vincent Ponko, Jr.

Documentation: One tape cassette (2 sides) Transcript (31 pages)

Access: Category 2 plus unclassified

Bowen, Dr. Edward G.

Subject: Research engineer and physicist; key figure in radar research and development in England in late 1930s and World War II; member of the Tizzard Mission created to establish technical interchange between the United States and Great Britain in area of radar.

Contents: Radar development in England in the 1930s, radar as a source of cooperation and conflict between the United States and Great Britain, development of airborne radar and evolution of radar technology during World War II.

Date of Interview: 16 May 1979 *Interviewer*: David K. Allison

Documentation: Four tape cassettes (7 sides)
Typewritten index (7 pages)

Access: Category 2 plus unclassified

Bowen, Harold G., Jr.

Subject: Son of ADM. Harold G. Bowen, Sr., who was Chief, Navy Bureau of Engineering (1935-1939); director, NRL (1939-1942); special assistant to Undersecretary of Navy (1942-1944); head, Navy Office of Research and Inventions (1944-1946); and first chief, Navy Office of Naval Research (1946-1947).

Contents: Interview concerns career and activities of Bowen, Sr., as recalled by Bowen, Jr.

Date of Interview: 23 April 1979 *Interviewer*: David K. Allison

Documentation: One tape cassette (2 sides)
Handwritten index (4 5 × 8 index cards)

Access: Category 1 plus unclassified

Cleeton, Dr. Claude

Subject: Research engineer; joined NRL in 1936 and conducted pioneering research in microwave communications and digital electronic circuits; technical head, Combined Research Group to develop uniform radar identification and recognition system for the Allied forces during WW II; directed NRL programs in advanced radar development and applications, particularly in relation to Space Surveillance System; branch head to associate director of research for electronics, 1946-1972.

Contents: Perspectives on Naval electronics research and applications, 1936-1972

Date of Interview: 22 January 1979 *Interviewer*: David K. Allison

Documentation: Two tape cassettes (4 sides)
Handwritten list of questions asked (2 5 × 7 index cards)

Access: Category 2 plus unclassified

Drummeter, Dr. Lewis F.

Subject: Physicist, specializing in optics; joined NRL in 1946, and played key role in development of NRL's programs in optical science and technology, in particular optical radiometry, quantum optics, and high-energy lasers; section head to associate director of research (acting) for materials science and technology, 1946-1981.

Contents: Perspectives on NRL R&D programs in optics and atomic tests and on organization and management of the NRL research program. The interviews are supplemented by a collection of papers.

Dates of Interviews: 20 December 1979 and 14 and 18 January 1980

Interviewer: David K. Allison

Documentation: Six tape cassettes (7 sides)

Access: Category 2 plus unclassified

Ebbert, CAPT. (USN) Edwin L.

Subject: Chief staff officer to NRL commanding officer, 1974-1982; responsible for Laboratory security and for liaison between operational and research sides of the Laboratory.

Contents: Perspectives on NRL's commanding officers and directors of research and on problems involved in translating Navy operational requirements into R&D programs.

Dates of Interviews: 18 and 22 June 1982 *Interviewer*: John A. S. Pitts

Documentation: Two tape cassettes (4 sides)
Typewritten index (4 pages)

Access: Category 2 plus unclassified

Fiber Optics History

Subject: NRL pioneered in fiber optics research and has been the Navy's lead laboratory for the tri-service Fiber Optics Sensor System (FOSS) development program.

Contents: Interviews with three key participants in the FOSS program; all interviewed by David K. Allison.

Corome, Dr. Edward F.: Interviewed on 5 August 1980. Two tape cassettes, three sides, plus typewritten index (1 page). Unclassified tapes and index and Category 1 access.

Davis, Dr. Charles M.: Interviewed on 1 July 1980. Two tape cassettes, typewritten index (4 pages), and transcript of selections from interview entitled, "FOSS: A Glance at the Past." All items unclassified and Category 1 access.

Giallorenzi, Dr. Thomas G.: Interviewed on 26 September 1980. One tape cassette (2 sides) plus handwritten list of questions asked (3 5 × 7 index cards). Items unclassified and Category 1 access.

Gebhard, Dr. Louis A.

Subject: Physicist, specializing in radio and radio-electronics; Navy civilian scientist, 1917-1965; joined NRL in 1923; research resulted in more than 90 patents and significant advances in radar, radio communications, direction-finding, and electronics; received Presidential Certificate of Merit and numerous honorary degrees; branch head to division superintendent at NRL, 1923-1965; numerous technical publications plus *Evolution of Naval Radio-Electronics and Contributions of the Naval Research Laboratory*.

Contents: Perspectives on radio-electronic research and development in Navy and at NRL, 1917-1977.

Dates of Interviews: 12 and 19 September and 3 October 1977.

Interviewer: David K. Allison

Documentation:: Six tape cassettes (11 sides)
"An Interview with Dr. Louis Gebhard," a printed and bound transcript available in the NRL Library
One tape cassette of an interview by Dan Wheeler of *All Hands* magazine and typewritten index (2 pages)

Access: Category 1 plus unclassified

Guthrie, Robert

Subject: Technician; Chief assistant to Dr. Robert Page, 1929-1941, providing technical support for development of first radar devices, superintendent, NRL's Radar Division, 1954-1964; recipient, DoD Distinguished Civilian Service Award for determination of radar performance standards.

Contents: Perspectives on development of radar at NRL, U.S.-British coordination on radar, and NRL research management.

Date of Interview: 13 April 1978 *Interviewer*: David K. Allison

Documentation: Three tape cassettes (6 sides)
Typewritten index (5 pages)

Access: Category 2 plus unclassified

Henifin, CAPT. (USN) Edward E.

Subject: NRL commanding officer, 1978-1981; initiated and carried out major change in management structure of NRL, involving formation of Executive Directorate for joint Laboratory management by NRL commanding officer and NRL director of research.

Contents: Perspectives on R&D management in Navy and at NRL and on management change and the circumstances leading to it.

Date of Interview: 18 January 1980 *Interviewer*: David K. Allison

Documentation: One tape cassette (2 sides)
Typewritten summary (6 pages)

Access: Category 3 plus unclassified

Hollings, Anthony J.

Subject: Commander, Royal Navy, 1938-1954; joined NRL as intelligence analyst and scientific staff assistant, 1955-1963; appointed head, NRL Research Program Office, 1963, and directed NRL project to search for THRESHER; executive assistant to NRL director of research, 1971-1980.

Contents: Perspective on career in Royal Navy, involvement with harbor defense and shock and vibration programs at NRL, management of the NRL project to search for the THRESHER, and management of research at NRL and major organizational and management changes which occurred between 1963 and 1980. The interviews are supplemented by a collection of papers.

Dates of Interviews: 4 and 8 January 1980 *Interviewer*: David K. Allison

Documentation: Five tape cassettes (9 sides)
Typewritten index (8 pages)

Access: Category 1 plus unclassified

Hooker, Ruth

Subject: Librarian; established NRL technical library.

Date of Interview: 11 October 1979 *Interviewer*: David K. Allison

Documentation/Access: Two tape cassettes (3 sides); Category 1

Hulburt, Dr. Edward O.

Subject: Physicist, specializing in optics; joined NRL in 1924 and established Laboratory's first Optics Division; superintendent, Optics Division, 1924-1949; first NRL director of research, 1949-1955; made many notable contributions to research in physical optics, particularly in relation to upper atmospheric and space research; authored or co-authored over 100 scientific publications.

Contents: Perspectives on NRL's research programs in optics, 1924-1955 and on management of research at NRL, 1949-1955.

Dates of Interviews: 22 August and 8 September 1977 *Interviewer*: David K. Allison

Documentation: Five tape cassettes (8 sides)
"An Interview with Dr. Edward Olson Hulburt," printed and bound copies of transcript available in NRL Library (49 pages)

Access: Category 1 plus unclassified

Johnson, Charles Y.

Subject: Electrical engineer, specializing in atmospheric physics; joined NRL in 1943 and made significant contributions to development of NRL's rocket-borne experiments programs of the late 1940s and the 1950s and notable discoveries relating to the ionosphere and cosmic rays.

Contents: Perspectives on upper atmospheric research at NRL, 1943-1975.

Dates of Interviews: 5, 8, 11, and 15 January and 25 May 1979

Interviewer: David K. Allison

Documentation: Eleven tape cassettes (22 sides)
Typewritten index (10 pages)

Access: Category 1 plus unclassified

Laser History

Subject: Series of interviews, with various persons, undertaken to document laser technology at NRL. The interviews consist of descriptions and explanations of individual photographs of equipment. The tapes are keyed to the photographs, and the latter are in permanent storage at the Federal Records Center, Suitland, Maryland.

Dates of Interviews: 4 and 12 March 1981 *Interviewer*: David K. Allison

Documentation: Three tape cassettes (6 sides)

Access: Category 3 plus unclassifed, but "For Official Use Only"

Lockhart, Dr. Luther

Subject: Organic chemist; came to NRL in 1943; pioneered in development of sampling methods for natural and fission product radioactivity in atmosphere and headed team that identified first foreign nuclear explosion; notable contributions to infrared and Raman spectroscopy, mass spectrometry, magnetic resonance spectroscopy, and laser technology.

Contents: Perspectives on research in atmospheric radioactivity.

Dates of Interviews: 3 and 10 July 1979 *Interviewer*: David K. Allison

Documentation: Four tape cassettes (7 sides)
Typewritten index (6 pages)

Access: Category 1 plus unclassified

Page, Dr. Robert M.

Subject: Research engineer; came to NRL in 1927 and headed NRL team which developed first practical radar; primarily responsible for Navy having this equipment in operation on major warships prior to outbreak of World War II; NRL division superintendent with responsibility for radar, electronics components, missile guidance communications, and systems integration, 1946-1957; NRL director of research 1957-1966.

Contents: Perspectives on development of radar and management of research at NRL.

Dates of Interviews: 26 and 27 October 1978 *Interviewer*: David K. Allison

Documentation: Nine tape cassettes (16 sides)
"An Interview with Doctor Robert Morris Page," printed and bound transcript available in NRL Library

Access: Category 1 plus unclassified

Peterkin, Ernest W.

Subject: Electrical engineer; came to NRL in 1947; notable accomplishments included heading team which established and developed Operations Center for Space Surveillance System and managing NRL's solar radiation (SOLRAD) satellite program. The interviews are supplemented by a collection of papers on research management.

Contents: Perspectives on SOLRAD program.

Date of Interview: 20 July 1981 *Interviewer*: David K. Allison

Documentation: One tape cassette (2 sides)

Access: Category 2 plus unclassified

Sanderson, Dr. John A.

Subject: Physicist, specializing in optics; came to NRL in 1935 and worked directly under E.O. Hulburt; superintendent, NRL Optics Division, 1949-1965.

Contents: Interview conducted to supplement Hulburt oral history; primarily perspectives on Hulburt and Hulburt's cohorts.

Date of Interview: 31 August 1977 *Interviewer*: David K. Allison

Documentation: Three tape cassettes (5 sides)
Typewritten index (4 pages)

Access: Category 2 plus unclassified

Trexler, James H.

Subject: Electronics technician, specializing in electronics countermeasures and high-frequency direction-finding technology; came to NRL in 1942 and directed major projects leading to the development and construction of radio telescope facilities.

Contents: Perspectives on radio telescope projects at Stump Neck, Maryland and Sugar Grove, West Virginia and on electronics countermeasures R&D at NRL. The interviews are supplemented by a collection of papers on research management.

Date of Interview: 30 October 1980 *Interviewer*: David K. Allison

Documentation: Five tape cassettes (10 sides)

Access: Category 3 plus unclassified

Zisman, Dr. William A.

Subject: Chemist and physicist, specializing in fuels and lubricants; came to NRL in 1933; made major contributions to development of synthetic lubricants, including the pioneering research leading to development of Teflon and establishment of surface chemistry as a critical field of naval research; received 28 patents and authored/coauthored 134 scientific publications; branch head to superintendent, Chemistry Division, 1932-1968; Appointed to NRL Chair of Science for Chemical Physics, 1968.

Contents: Perspectives on American scientific community in 1930s and problems of placement for Jewish scientists and on chemical research at NRL, 1932-1978. Includes two interviews with associates.

Dates of Interviews: 15, 16, and 24 July 1980 *Interviewer*: Stephen Merkel

Documentation: Six tape cassettes (11 sides)

Access: Indeterminate. Due to death of subject, release forms were not obtained.

Other Oral Histories

Subject: The NRL Oral History Collection includes four oral histories that were compiled outside the auspices of the NRL History Program. Copies of tapes and indices were obtained because the interviewees either were former employees of NRL or performed work which bore on research at NRL. These include:

Bowyer, C. Stewart. An NRL space scientist interviewed in 1976 and 1978 by Richard Hirsh in conjunction with the National Air and Space Museum (NASM) and the American Institute of Physics (AIP). The original tapes and transcript are at NASM. The NRL Oral History Collection includes copies of the tapes (2 tapes, 4 sides) and a copy of the unedited transcript. Permission to use the tapes and the transcript must be obtained from the NASM.

Chubb, Dr. Talbot. An NRL space scientist interviewed in 1978 by Richard Hirsh in conjunction with the AIP. NRL has copies of the two cassette tapes (4 sides) and a copy of the unedited transcript. Permission to use the tapes and transcript in the NRL Oral History Collection must be obtained from the AIP.

Wolff, Dr. Irving. An RCA physicist involved in radar research in the 1930s and 1940s interviewed in 1976 as part of an RCA history project. In 1978, a follow-up interview was conducted by the NRL historian. The original interview consists of two tape cassettes, copies of which are in the NRL Oral History Collection. The follow-up interview produced one tape cassette. The NRL historian prepared a typewritten index (6 pages) to all three tapes. Permission to use the first two tapes and the index to same must be obtained from RCA.

Young, Dr. Leo C. An NRL research engineer from 1923-1967, who invented the equipment which was used to make the first detection of a moving vessel by radio signal and was one of several NRL scientists whose discoveries contributed to the development of radar, was interviewed by oral historians at the Library of Congress. The NRL Oral History Collection contains two tape cassettes (3 sides), which are copies of tapes Nos. 150 and 151 of the Stanford C. Hooper Collection, Library of Congress. The NRL copies have not been transcribed or indexed.

NRL HISTORICAL REFERENCE COLLECTION

The NRL Library houses an extensive collection of materials relating to naval history, the history of naval R&D, and NRL history. The collection includes both materials which are managed by the NRL librarian and those which are managed by the NRL historian.

Library Historical Reference Materials

The Library has over 100 books and unpublished manuscripts related to NRL history within its general reference collection. Most of these are catalogued under the LC designation, V 394___. The collection includes published and unpublished histories, transcripts of interviews with NRL officials, and miscellaneous reference documents. The Library also has more than 200 books related to naval history and the history of naval R&D.

Reference Files of the NRL Historian

The NRL historian maintains a reference collection in the NRL Library. The files include secondary source materials, such as newspaper clippings, official press releases, program summaries of research offices, code sheets and telephone directories and similar materials, and copies of important archival documents. The files are organized into NRL Administrative History, NRL General History, Office of Naval Research (ONR) History, Factbooks and Annual Reports, Biographies, and Scientific Programs. The last of these is divided into separate files for Electronics, Materials, Oceanology, Space Science, and General Science. All of these files are unclassified and may be used by NRL employees with the prior approval of the NRL historian. The historian also maintains a classified reference collection.

Historical Maps, Blueprints, and Photographs

The NRL librarian and the NRL historian jointly maintain a collection of NRL maps and blueprints of NRL buildings, both dating to the 1920s. These are unclassified but are housed in locked map cabinets in the basement of the main administration building (Building 43).

The NRL Public Works Division (Code 2500) maintains a permanent collection of drawings and correspondence related to the design of public works projects at NRL. All items are originals, prints, or sepias of designs and date to 1923.

Two collections of historical photographs are maintained on the Laboratory. The NRL historian maintains a small collection of approximately 100 photographs, most of which predate 1945 and relate to radar and radio-electronics. The NRL Photographic Branch (Code 2650) maintains a general collection of historical photographs, most of which date from the early 1950s.

NRL LIBRARY HOLDINGS

The NRL Library has two components: the main Library and the Documents Section. The former houses unclassified books and journals, whereas the latter handles technical documents at all

levels of classification through secret and classified journals. Together, the two form a central repository for material written or published by NRL staff members or written about the Laboratory and its work. The following are holdings in which historical researchers may be interested.

Collections of Unclassified NRL Publications

The Library has several series of institutional records which are shelved on the open stacks. These include: (1) "Miscellaneous Papers," a 24-volume set (1957-1962) of unpublished technical papers and manuscripts by NRL authors; (2) "Monographs of Naval Research Laboratory Personnel," a two-volume set (1941-1946) of unpublished technical papers by NRL authors; and (3) "Publications of Naval Research Laboratory Personnel," 77 bound volumes (1923-1983) of reprints of technical articles by NRL staff members and published in the open professional literature. There are no finding aids to any of these collections.

Collections of Technical Documents

The Documents Section handles technical reports received on distribution from NRL and from outside agencies. These include materials sent in hard-copy form from the originator and microfiche materials received from the Defense Technical Information Center (DTIC). The documents received in hard-copy form, regardless the originator, are given a sequential accession number when received and are shelved in numerical order, either as classified or as unclassified documents. The materials are indexed in a master card file and organized sequentially by accession number. The individual cards give a complete history of each document, including final disposition. The documents are cross-referenced in several special indices: a corporate author index, which lists documents by title of originator, an author index, a project name index; a subject index; and a contract number index.

Technical reports by NRL and ONR authors are retained permanently in hard-copy form. These include the NRL Formal Report series (1933-present), NRL Memorandum Report series (1952-present), ONR Report series (1946-present), NRL Instruction Books (1955-present), NRL Test and Evaluation Reports (1955-present), Report of NRL Progress and NRL Annual Reviews (1946-present), and NRL Fact Books (1969-present). The Documents Section also retains some NRL reports which are not part of any series (e.g., administrative reports). Technical reports which originate outside NRL are purged and destroyed upon notification of the originator or according to automatic schedules. Microfiche copies of these reports are retained permanently.

RESEARCH REQUESTS AND PROPOSALS

NRL will respond to reference requests from historians who are planning to undertake studies of the history of naval research and its relationship to the history of American science and technology, providing the request relates to unclassified research, concerns a clearly defined research project, and is reasonably narrow in scope. The Laboratory does not have the historical staff resources to perform actual research for requesters, answer long lists of questions, compile bibliographies, or perform photoduplication services. Requests for information relating to classified research should be submitted to The Assistant Secretary of Defense for Public Affairs.* Requests to perform research on the Laboratory and to photocopy unclassified materials will be handled by the NRL commanding officer on an individual basis.

NRL does not have a formal program for funding extramural historical research projects. However, the Laboratory occasionally hires summer history interns and/or funds historical contractors to undertake specific projects. Such projects are defined by Laboratory personnel; NRL does not have the staff resources to review unsolicited proposals.

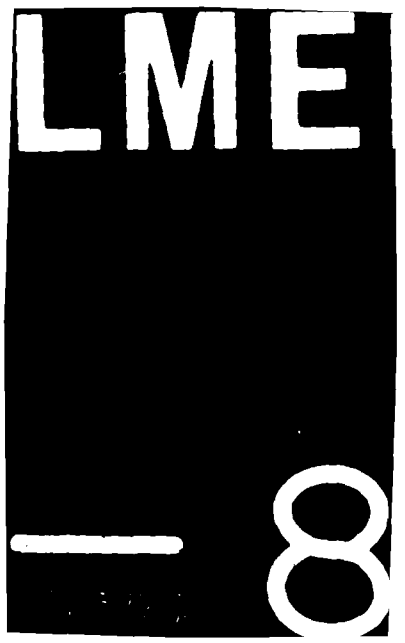
*These conditions apply only to historians who work outside the Department of Defense. DoD historians who have a security clearance and a "need to know" will normally be granted access to classified NRL materials and be permitted to perform research on the Laboratory, providing they have received approval from the commanding officer.

Reference requests and requests for guidance on the above matters should be submitted to:

Commanding Officer
Attention Code 2604
Naval Research Laboratory
Washington, DC 20375

Historians who wish to familiarize themselves with the Laboratory should consult the NRL *Fact Book* and the NRL *Review*. Copies of these are available by request from:

Commanding Officer
Attention Code 2628
Naval Research Laboratory
Washington, DC 20375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